



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,853	04/02/2001	Simon Jacobs	500744.02	9972
27076 7590 04/10/2008 DORSEY & WHITNEY LLP INTELLECTUAL PROPERTY DEPARTMENT SUITE 3400 1420 FIFTH AVENUE SEATTLE, WA 98101				
EXAMINER JARRETT, SCOTT L				
ART UNIT 3623		PAPER NUMBER		
MAIL DATE 04/10/2008		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/824,853

Applicant(s)

JACOBS ET AL.

Examiner

SCOTT L. JARRETT

Art Unit

3623

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 10/20/2007
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This **Final** Office Action is in response to Applicant's amendment filed December 10, 2007. Applicant's amendment canceled claims 1-7 and amended claims 8-12. Currently claims 8-12 are pending.

Response to Amendment

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.

Response to Arguments

3. Applicant's arguments with respect to claims 8-12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 8-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 8, Claim 8 (Line 10) recites the limitation "a shift identified in **the** opening" in Claim 8. There is insufficient antecedent basis for this limitation in the claim. Examiner requests clarification as to which of the previous at least two openings recited in independent claim 8 the applicant is intending to refer. Specifically is the opening the customer specified opening *or* the opening identified by iterative through a list of shifts potentially having sufficient time to accommodate the order, as recited in the preamble?

Examiner interpreted the claim to read **an** opening as referring to any one or combination of the openings recited for the purpose of examination.

Further regarding Claim 8, Claim 8 (line 13) recites the limitation "intersecting **the** opening and the appointment window" in Claim 8. There is insufficient antecedent basis for this limitation in the claim. Examiner requests clarification as to which of the previous at least three openings recited in independent claim 8 the applicant is intending to refer. Specifically is the intersection performed between the customer specified appointment window and the customer specified opening *or* between the

customer specified appointment window and the openings defined in the range of time to which the order can be assigned or the customer specified appointment window and one of the openings identified by iterative through a list of shifts potentially having sufficient time to accommodate the order, as recited in the preamble?

Examiner interpreted the claim to read that the intersection occurs between the customer specified appointment window and any one or combination of the openings recited for the purpose of examination.

Further regarding Claim 8, Claim 8 (Line 14) recites "defined by **the** overlap of **the** opening and the appointment window" in Claim 8. There is insufficient antecedent basis for this limitation in the claim.

Examiner interpreted the claim to read "defined by **an** overlap of **an** opening and the appointment window" of the appointment window and any one or combination of the openings recited (as discussed above) for the purpose of examination.

Further regarding Claim 8, Claim 8 (Line 15) recites "assigning the order to **the** opening" in Claim 8. There is insufficient antecedent basis for this limitation in the claim.

Examiner interpreted the claim to read "assigning the order to **an** opening" wherein the opening may include any one or combination of the openings recited (as discussed above) for the purpose of examination.

Further regarding Claim 8, Claim 8 (Line 16) recites "blocks includes **the** opening **the** opening is within **the** time range" in claim 8. There is insufficient antecedent basis for this limitation in the claim. Examiner requests clarification as to which of the at least

three previous opening and the at least two time ranges (Line 12, Line 13) the applicant is intending to refer.

Examiner interpreted the claim to read "blocks includes **an** opening **an** opening is within **a** time range" for the purpose of examination.

Further regarding Claim 8, Claim 8 (Line 19) recites "with **the** appointment window" in Claim 8. Examiner requests clarification as to which appointment window the applicant intends to refer to – the customer appointment window specified on Line 8 or the customer appointment window on Line 17 or both? Further examiner requests clarification as to the nature of the customer specified appointment window and openings recited in Lines 8-9 and 17-18 are these customer specifications mutually exclusive? Do they represent the same or different order/appointment/service requests? Are the customer specifications during the same or different calls to request the service?

Examiner interpreted the claim to read "with **a** appointment window" for the purpose of examination wherein the appointment window may be one or both of the appointment windows discussed above.

Appropriate correction required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell et al. U.S. Patent Publication No. 2001/0049619 in view of WebVan as evidenced by at least the following:

- I. Clyde, Witt, UPDATE: Material Handling in the Food Industry (October 1999), herein after WV1;
- II. Borders et al., WO 00/68859 (November 2000), herein after WV2; and
- III. Borders et al., WO 00 (November 2000), herein after WV3.

as best understood in light of the 35 U.S.C. 112(2) rejections discussed above.

Regarding Claim 8 Powell et al. teach an order assignment system (computer readable medium having instructions thereon for causing a computer to perform the method) comprising (Abstract, Paragraphs 0001, 0004, 0014-0017, 0021-0022, 0034-0037, 0042-0045, 0055):

- a customer has specified both an appointment window (start/end time, time slot/interval/block) and an opening (day, month, week, year, horizon, interval, slot, windows, etc.; e.g. Monday) for an order (reservation, appointment; Paragraphs 0014-0017, 0021-0022, 0034-0037, 0042-0045);

- generating a list (set) of schedulable (available, open, potential, candidate, etc.) time blocks (slots, windows, days, times, intervals, range, etc.) for a shift (calendar, schedule, etc.) identified in an opening, the schedulable time blocks having at least one of a free time block (i.e. no order/appointment scheduled) and a virtual free time block (a free time block or an already schedule appointment that can be moved/shifted/slide/rescheduled, etc.) and defining a range of time having openings (schedulable time blocks, free time blocks, virtual free time blocks, etc.) to which the order can be assigned number of days/weeks, service provider schedule/availability, etc.; Abstract; Paragraphs 0016-0017, 0034, 0045, 0055; "A service provider can quickly generate a schedule in real time with narrow time windows at which a service technician may be on site at a customer's residence or facility.", Paragraph 0022; ; Figure 2, Figure 4, Elements 54, 56);

- intersecting (joining, overlapping, unioning, etc.) an opening (customer specified opening *or* opening is range of time *or* opening from the list of shifts) to obtain a time range (interval, block, window, slot, etc.) defined by *an* overlap of the opening (customer specified opening *or* opening is range of time *or* opening from the list of shifts) and the appointment window (actual service request replacing matching/closets estimated/forecasted service request; Paragraphs 0017, 0036-0037, 0045, 0055; Figure 4, Elements 54, 58, 60);

- assigning the order to an opening (customer specified opening *or* opening is range of time *or* opening from the list of shifts) if a schedule time block from the list of

Art Unit: 3623

schedulable time blocks includes an opening and an opening is within a time range (Paragraphs 0016-0017, 0021-0022, 0049, 0054, 0065).

Powell et al. does not expressly teach where a customer has specified an appointment and not specified an opening for the order as claimed.

WebVan teaches assigning an order to a schedule after the customer has specified an appointment window and not specified an opening for the order (reference WV1: Paragraphs 2-4, Page 4; Paragraphs 1-3, Page 7; reference WV2: transportation subsystem, route planner, delivery window estimator component, dispatch subsystem; Pages 18-19, 45-47; Figure 1, Elements 118, 124, 132, 160; Figure 5; Figure 7A, Elements 10-22; reference WV3: route planning, Pages 37-41; Pages 3, 18, 33-35, 38-40) in an analogous art of order scheduling for the purposes of determining the availability of order (delivery) resources and route planning (reference WV3: Pages 18-19; reference WV3: route planning, Pages 37-41).

WebVan further teaches a system and method for assigning an order to a schedule after a customer has specified an appointment window in the schedule, the method/system comprising (reference WV1: Paragraphs 2-4, Page 4; Paragraphs 1-3, Page 7; reference WV2: transportation subsystem, route planner, delivery window estimator component, dispatch subsystem; Pages 18-19, 45-47; Figure 1, Elements 118, 124, 132, 160; Figure 5; Figure 7A, Elements 10-22; reference WV3, Pages 3, 18, 33-35, 38-40):

- checking a list of openings for overlap (intersection, commonality, union, similarity) with a appointment window (zone window creator, delivery window estimator component, delivery window reservation, delivery scheduling, scheduled delivery hours; reference WV2: "One function of the Transportation Subsystem is to generate a list of available delivery windows (for presentation to the customer) based upon transportation capacity data such as, for example, the number of couriers available, the number of delivery vehicles available, the number of orders for a particular day, truck routes, etc.", Lines 20-33, Page 18; Lines 1-18, Page 19; Lines 31-32, Page 44; Lines 31-33, Page 45; Lines 1-11, Page 46; Figure 7A, Elements 10-22; reference WV3: Page 3, Lines 13-21, Page 21; Lines 19-23, Page 24; Lines 18-22, Page 33; Pages 34-35);

- generating a list of schedulable time blocks if there is no overlap, each of the schedulable time blocks having at least one of a free time block and a virtual free time block and defining a range of time having openings to which the order can be assigned (e.g. adding new routes, providing customer with alternative delivery times/windows if one or more items are not deliverable in the selected time window, window templates, etc.; reference WV2: Lines 31-32, Page 44; Lines 1-2, Page 45; reference WV3: Lines 1-9, Page 7; Lines 11-16, Page 32); and

-assigning the order to the schedule if there is an opening in the list of openings that overlaps with a appointment window or an opening in the list of scheduling time blocks that overlaps with a appointment window (allocating orders to specific routes, trucks, zones, delivery schedules/windows, stops, etc.; route planner, dispatch

Art Unit: 3623

subsystem, reserving subsystem capacities; reference WV2: Lines 20-32, Page 18; Lines 21-30, Page 19; Lines 1-8, Page 20; Lines 8-31, Page 38; Lines 1-19, Page 39).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for assigning an order to a schedule as taught by the Powell et al. would have benefited from a WebVan further teaches assigning an order to a schedule after the customer has specified an appointment window and not specified an opening for the order in view of the teachings of WebVan; the resultant system/method enabling users to reserve an appointment window prior to completing their shopping.

Regarding Claim 9 Powell et al. does not expressly teach updating a tour time of a shift as claimed.

WebVan teaches updating a tour time of the shift (schedule, itinerary, route, calendar, etc.), wherein updating includes incrementing the time required to travel to the order and from the order to a next order, wherein updating includes incrementing a booked time for the shift by an amount of time needed for traveling to the order and an amount of time needed to work on the order and wherein updating includes adjusting a load level (capacity) of the shift to account for the order (reference WV3: "Route Planning", Lines 20-25, Page 37; Pages 38-40; "Van Stop Process", Pages 64-65; "Tote to Door Process", Pages 65-66) in an analogous art of order scheduling for the purpose

Art Unit: 3623

of updating resource (delivery) availability (capacity – e.g. trucks, vans, totes, etc.) to ensure that there is enough capacity (load) to service customer appointments/deliveries and potentially assign/release additional resources if necessary (reference WV2: capacity profile; Pages 37-39; reference WV3: consumer delivery scheduling, Pages 33-35).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for assigning an order to a schedule as taught by the Powell et al. would have benefited from adjusting a load level of a shift to account for the order in view of the teachings of WebVan; the resultant system/method keeping resource (delivery) availability (capacity – e.g. trucks, vans, totes, etc.) up-to-date thereby ensuring there is enough capacity (load) to service customer appointments/deliveries and potentially assign/release additional resources if necessary (reference WV2: Paragraphs 1-2, Page 39; reference WV3: consumer delivery scheduling, Pages 33-35).

Regarding Claim 10 Powell does not expressly teach aggregating at least two orders as claimed.

WebVan teaches aggregating at least two orders according to an aggregation criteria (route planning/planner, capacity planning/reservation; reference WV2: Lines 17-25, Page 18; reference WV3: Pages 38-40) in an analogous art of order

Art Unit: 3623

assignment/scheduling for the purpose of optimizing routes and/or route capacity (reference WV3: Pages 38-40).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for assigning orders to a schedule as taught by Powell et al. would have benefited from aggregating at least two orders in view of the teachings of WebVan; the resultant system/method enabling users to optimize routes and/or route capacity (reference WV3: Pages 38-40).

8. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell et al. U.S. Patent Publication No. 2001/0049619 in view of WebVan as evidenced by at least the following:

- I. Clyde, Witt, UPDATE: Material Handling in the Food Industry (October 1999), herein after WV1;
- II. Borders et al., WO 00/68859 (November 2000), herein after WV2; and
- III. Borders et al., WO 00 (November 2000), herein after WV3.

as applied to claims 8-10 above, and further in view of Nanry et al., Solving the pickup and delivery problem with time windows using reactive tabu search (2000).

Regarding Claim 11 Powell et al. does not expressly defragmenting a set of free time blocks in the shift as claimed.

Nanry et al. teaches well known techniques for defragmenting (reorganizing, re-planning, optimizing, shuffling, swapping, etc.) a set of time blocks (time periods, route stops, delivery windows, appointments, schedules, vans, trucks, etc.) in the shift (schedule, route, etc.; Section 3.2 Move Neighborhoods, Pages 112-113; Figures 1-3) in an analogous art of assigning orders to time windows for the purposes of developing an initial feasible delivery schedule solution for multiple routes (Section 3.1, Pages 111-112).

It would have been obvious to one skilled in the art at the time of the invention that the system and method for assigning orders to a schedule as taught by the combination of Powell et al. and WebVan would have benefited from utilizing any of a plurality of well known schedule optimization techniques such as defragmenting time blocks in view of the teachings of Nanry et al.; the resultant system/method developing an initial feasible delivery schedule solution wherein all orders are delivered (Nanry et al.: Section 3.1, Pages 111-112).

Regarding Claim 12 Powell et al. teach a system and method for assigning an order further comprising committing the shift, which has been modified to fit the order, to a database (Paragraphs 0043-0044, 0055, 0061; Figure 4).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- ROADNET 5000, teaches a commercially available system and method for assigning an order to a schedule.

- VisualStaffScheduler Pro, teaches a commercially available computer program product for shift scheduling.

- PrimeTime, teaches a publicly available system and method for shift scheduling.

- Collins et al., U.S. Patent No. 5,623,404, teach a system and method for scheduling orders to shifts.

- Onda et al., U.S. Patent No. 5,860,067, teach a system and method for scheduling orders to shifts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SCOTT L. JARRETT whose telephone number is (571)272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 09/824,853

Page 17

Art Unit: 3623

/Scott L Jarrett/

Primary Examiner, Art Unit 3623